The efficacy of albumin with diuretics in the mechanically ventilated patients with hypoalbuminemia: systematic review and meta-analysis

Yuki Itagaki1, Naofumi Yoshida2, Kohei Yamada3, Masahiro Banno4, Ryo Momosaki5, Mineji Hayakawa6, Yuki Kataoka7

1Emergency and critical care center, Sapporo city general hospital, Hokkaido, Japan;
2Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine, Kobe, Japan;
3Department of Traumatology and Critical Care Medicine, National Defense Medical College, Saitama, Japan;
4Department of Psychiatry, Seichiryo Hospital, Nagoya, Japan;
5Department of rehabilitation medicine, Mie University Graduate School of Medicine, Mie, Japan;
6Department of Emergency medicine, Hokkaido university hospital, Hokkaido, Japan;
7Department of Internal Medicine, Kyoto Min-Iren Asukai Hospital

ABSTRACT
Hypoproteinemia is significantly correlated with fluid overload, development of ARDS and mortality[1, 2]. According to a large European observational study, a positive fluid balance is one of the factors for death (OR 1.1, 95%CI 1.0-1.1, p-value 0.001)[3]. Thus, to achieve the improvement of systemic status and increase ventilator free days, reducing fluid volume is essential[4].

So far, the effect of albumin with the diuresis in hypoalbuminemia has been investigated in several randomized controlled trials (RCTs)[5-9]. Furthermore, a systematic review and meta-analysis suggested that the effect of albumin was limited only to transient improvements of urine volume[10]. However, this analysis did not investigate the mechanically ventilated critically ill patients. Although a systematic review in 2014 was conducted to investigate that colloids could improve diuresis in patients mechanically ventilated, this review did not include recent RCTs[11]. Thus, we still don't have a clear answer for the improvement of the haemodynamic stability, mortality or ventilator free days.

Our aim is to clarify the benefit of albumin administration for the mechanically ventilated patients in combination with the diuresis in this systematic review and meta-analysis.

ATTACHMENTS
- protocol-the_efficacy_of_albumin_with_diuretics_in_the_mechanically_ventilated_patients.pdf
- systematic_review_and_meta-analysis.pdf

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KEYWORDS
diuretics, albumin, Intensive care unit, edema, mechanical ventilation

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